DOCUMENT RESUME

ED 211 909 CG 015 702

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TITLE Sex Differences in the Relationship between Locus of Control Dimensions and Personal Adjustment Constructs.
PUB DATE Mar 81
NOTE 31p.; Revision of paper presented at the Annual Meeting of the Southeastern Psychological Association (Atlanta, GA, March 1981).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adjustment (to Environment); Child Rearing; Comparative Analysis; Emotional Adjustment; *Interpersonal Competence; *Locus of Control; Parent Influence; Self Concept; *Self Esteem; *Sex Differences; Social Behavior; Social Influences
IDENTIFIERS *Defensiveness

ABSTRACT

Although research has supported the relationship between locus of control and personal adjustment, many correlates of locus of control differ for males and females. Three samples of undergraduates completed the Reid-Ware Three-Factor Locus of Control Scale and either the Texas Social Behavior Inventory (N=64 males and 211 females), the Barron ego strength scale (N=189 males and 312 females), or the Repression-Sensitization Scale (N=20 males and 84 females). For both males and females, internals reported greater self-esteem and ego strength and tended to be repressors; externals tended to be sensitizers. For males, the Fatalism dimension of the Locus of Control Scale was the strongest predictor for each adjustment correlate, while the Social System Control dimension was not predictive for males. For females, the Social System Control dimension was predictive for each adjustment correlate, although it was not consistently the strongest predictor. The results are consistent with previous research on sex differences in parental antecedants of locus of control. (Author/NRB)

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ED211909

Sex Differences in the Relationship between Locus of Control Dimensions and Personal Adjustment Constructs

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Running head: Sex Differences in Locus of Control

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This is a revised version of a paper presented at the annual meeting of the Southeastern Psychological Association, Atlanta, Georgia, March, 1981.

Sex Differences in Adjustment Correlates of Locus of Control Dimensions

Recent reviews of the locus of control literature (Lefcourt, 1976; Phares, 1976) generally support the hypothesized relationship between locus of control and personal adjustment posited by Rotter (1966). An external orientation, the belief that one's outcomes are determined by fate, chance, or powerful others, has been related to debilitating anxiety, depression, neuroticism, and similar characteristics. On the other hand, an internal orientation, the belief that outcomes are determined by one's own behavior, has been related to such characteristics as independence, self-confidence, and social insight.

A persistent problem in this area, however, is that many correlates of locus of control differ for males and females. Research suggests a sex role explanation for this phenomenon related to child-rearing differences for the sexes that reflects a greater emphasis on individual achievement for males and on social and interpersonal relationships for females (Crandall, Note 1; Katovsky, Crandall & Good, 1967; Levenson, 1973).

Research on locus of control correlates is consistent with these suppositions. Warehime and Woodson (1971) used Rotter's (1966) Internal vs. External Control of Reinforcement (I-E) Scale and the Personal Feeling Scales (PFS) to

investigate the contention that internals have more positive self-affect than externals. Results were in agreement with that prediction. However, it was found that different PFS items contributed to the correlation for each sex. For males, internality was significantly related to feelings of personal freedom, work satisfaction, feelings of alertness, and feelings of adequacy regarding one's capabilities. For females, internality was significantly related to feelings of abundance and satisfaction as well as freedom from anxiety and depression. These dimensions appear to reflect an individual-cognitive orientation for males and a social-affective orientation for females.

Another study by Warehime & Foulds (1971) relating I-E to the Personal Orientation Inventory (POI), a measure of self-actualization, also provides evidence that males and females construe locus of control differently. In this investigation, more significant correlations between POI dimensions and locus of control were obtained for females than males. The authors suggested this obtained because the type of adjustment reflected in self-actualization, attaining an ideal of fulfillment, is not highly valued by males.

Another problem regards the degree of sex differences in responding to locus of control scales themselves. The scale used most extensively is the Rotter I-E. Factor

analyses of the I-E scale generally have yielded two major factors (MacDonald, 1973, Mirels, 1970). One factor appears related to an individual's sense of personal competence. The second factor appears to reflect the extent to which an individual feels competent to modify social systems. Recently, Strickland and Haley (1980) looked at sex differences in responding to items on the Rotter I-E scale. Most of the items on which there were sex differences reflected social and/or affective domains.

The differential responding by sex to items on the Rotter I-E may contribute to differential predictiveness as the two factors are not equally represented in the scale. Given the fewer items reflecting the social-affective orientation which appears more salient for females, response differences for the sexes may be attenuated.

Support for this idea was demonstrated by Sadowski, Davis, and Loftus-Vergari (1979) using the Reid-Ware Three Factor Locus of Control Scale to investigate the relationship between locus of control and death anxiety. The Reid-Ware consists of three factors. Twelve items each measure Fatalism and Social System Control. The Self-control factor consists of eight items. The Fatalism dimension focuses on chance and reflects a cognitive view of personal instrumentality. The Social System Control dimension focuses on influencing others. The Self-control dimension focuses on impulsiveness

and can be construed in both cognitive and affective terms. Using a multiple regression approach suggested by Reid and Ware (1974), Sadowski, et al. found that the Fatalism dimension was significantly correlated with death anxiety for males whereas the correlation for females was with the Social System Control dimension. The Self-control dimension correlated for both sexes. Similarly, Sadowski and Wenzel (Note 2) found Social System Control correlated with hostility among females but not males.

The studies reported here were undertaken to examine the relationship between locus of control dimensions and self-esteem (social competence), ego strength, and defensive style (repression-sensitization). These were selected as relevant personal adjustment dimensions since each construct, with the exception of ego strength, has been demonstrated to be an I-E correlate for both males and females (Altrocchi, Plamer, Hellman, & Davis, 1968; Artwohl, 1979; Fish & Karabenick, 1971; Rychman & Sherman, 1973, Tolor & Reznikoff, 1967). Based on the previous research, it was expected that internals would evidence greater self-esteem and ego strength than externals, and internals would tend to be repressors while externals would tend to be sensitizers for each sex. Moreover, considering the evidence which indicates an individual-cognitive orientation for males and a social-affective orientation for females in regard to internal

control, it was expected that the dimensions of the locus of control scale would be differentially predictive for males and females. Specifically, it was expected that the Fatalism dimension would predict better for males and that Social System Control would be a better predictor for females.

Method

The three studies are described jointly due to their similarity. Differences are noted where appropriate.

Subjects

Self-esteem sample. In the self-esteem study the subjects were 164 male and 211 female undergraduates enrolled in lower division psychology and sociology classes at Austin Peay State University. The males ranged from 18 to 49 years of age, M = 24.22 and SD = 8.02. The females ranged from 17 to 39 years of age, M = 20.32 and SD = 3.50.

Ego strength sample. The subjects in this study were 20 male and 40 female undergraduates from Austin Peay State Unviersity and 169 male and 272 female undergraduates from Emporia State University. The samples were combined since comparisons on the relevant variables indicated no significant differences for males, $F(4, 184) < 1$, or females, $F(4, 307) < 1$. Males ranged from 17 to 46 years of age, M = 19.95, and SD = 4.69. Females ranged from 17 to 42 years of age, M = 19.89 and SD = 4.50. All the subjects were

enrolled in introductory psychology classes at the respective institutions.

Defensive style sample. In this study the subjects were 20 male and 84 female undergraduates enrolled in introductory psychology classes at Austin Peay State University. Males ranged from 18 to 44 years of age, M = 22.20 and SD = 7.34. Females ranged from 17 to 45 years of age, M = 22.48 and SD = 6.27.

Participation in all cases was voluntary. In the first two studies participation fulfilled a course requirement. Subjects in the third study received optional bonus credit for their participation.

Instruments

Locus of control. Locus of control was measured with the Reid-Ware Three Factor Locus of Control Scale (Reid & Ware, 1974). This instrument consists of 45 items, including 13 fillers, in a forced-choice format. Three dimensions are measured. The Fatalism and Social System Control dimension each consist of 12 items. These are similar in content to items used in the Rotter I-E scale. The Self-control dimension consists of eight items. Each scale is scored in the direction of externality. Assessments of the instrument indicate the scales are relatively reliable and independent (Reid & Ware, 1974; Sadowski, Blair, and Dickinson, Note 3).

Self-esteem. The Texas Social Behavior Inventory Form A

(Helmreich & Stapp, 1974) was used to measure self-esteem. This scale consists of 16 Likert-type statements regarding individuals' perceptions of their confidence, comfort, and competence in social situations. Responses are made on 5-point scales with options labeled "Not at all/Not very/ Slightly/Fairly/Very much characteristic of me." Items are scored 0-4 and totals are summed over items. Higher scores indicate greater self-esteem. Information about the properties of the scale are reported in Helmreich and Stapp (1974).

Ego strength. Ego strength was measured by the Barron (1953) ego strength scale developed from the Minnesota Multiphasic Personality Inventory. The Barron scale consists of 68 true-false items which measure adaptability, personal resourcefulness, and various aspects of effective personal functioning. In this study the Zander and Thomas (Crandall, 1973) scoring was used. This system uses 24 of the items which are reported to have greater reliability and validity than the larger scale. Higher scores indicate greater ego strength. Information about reliability and validity are available in Crandall (1973).

Defensive style. The Repression-Sensitization Scale (Byrne, 1961; Byrne, Barry, & Nelson, 1963) was used to measure defensive style. This scale consists of 127 true-false items derived from the MMPI. The repressive extreme involves chronic avoidance tendencies while the sensitization

extreme refers to approach defenses. Higher scores represent a greater tendency toward sensitization. Byrne (1965) reports on the reliability and validity for the scale.

Procedure

The scales were administered during regular class periods or in group sessions which varied in size. Respondents in each case were given a test booklet presenting the Reid-Ware scale first and the particular adjustment measure second. The scales were completed at each individual's own pace. Upon completion of the questionnaires, the subjects were informed about the nature and purpose of the particular study in which they were involved.

Results

Following the suggestion by Reid and Ware (1974), the locus of control dimension were regressed on each adjustment correlate to examine their contributions. Separate analyses were conducted for males and females in each sample. Both the standardized partial regression coefficients β and the relative weights βr were analyzed as indices of the contribution of each locus of control dimension.

Self-esteem

Table 1 presents the means and standard deviations for the locus of control dimensions and self-esteem along with

the intercorrelations among these variables. The summary of the regression analysis appears in Table 2. It can be seen in Table 2 that locus of control was significantly related to self-esteem for males, R^2 = .111, $F(3, 160) = 6.636$, $p < .001$, and for females, R^2 = .089, $F(3, 207) - 6.760$, $p < .001$. An examination of the correlations in Table 1 and the standardized regression coefficients in Table 2 indicates that internals reported higher levels of self-esteem than did externals.

The standardized regression coefficients and relative weights in Table 2 indicate the locus of control dimensions are differentially related to self-esteem for males and females. The Fatalism dimension was most strongly related to self-esteem for males, both in terms of its independent contribution, $F(1, 160) = 6.502$, $p < .05$, and in relation to the other predictors, $F(1, 160) = 12.302$, $p < .001$. For females, the Social System Control dimension was most strongly related to self esteem, both independently, $F(1, 207) = 8.740$, $p < .005$, and relatively, $F(1, 207) = 11,928$, $p < .001$.

Insert Tables 1 and 2 about here

Ego strength

Descriptive statistics for the locus of control dimensions and ego strength are presented in Table 3 along with

the intercorrelations. Table 4 presents the summary of the regression analyses of the locus of control dimension on ego strength. Locus of control was significantly related to ego strength for males, $R^2 = .178$, $F(3, 185) = 13.271$, $p < .001$, and for females, $R^2 = .115$, $F(3, 308) = 13.312$, $p < .001$. The correlations in Table 3 and the standardized betas in Table 4 indicate internals reported greater ego strength than did externals.

The regression analyses also indicate that the locus of control dimensions were differentially related to ego strength for males and females. Fatalism was significantly related to ego strength for males both independently, $F(1, 185) = 18.536$, $p < .001$, and relatively, $F(1, 185) = 22.731$, $p < .001$. The significant standardized beta, $F(1, 135) = 13.132$, $p < .001$, and relative weight, $F(1, 185) = 16.655$, $p < .001$, also show that the Self-control dimension made a significant contribution to the ego strength variance for males. Social System Control, on the other hand, was not significantly related to ego strength for males, $Fs < 1$.

For females, Fatalism was also the locus of control dimension most strongly related to ego strength independently and relatively, $F(1, 308) = 19.187$, $p < .001$, and $F(1, 308) = 29.234$, $p < .001$, respectively. However, as predicted, the Social System Control dimension was significantly related to ego strength for females both independently,

$F(1, 308) = 4.597$, $p < .05$, and relatively, $F(1, 308) = 10.441$, $p < .005$. The Self-control dimension did not contribute to the ego strength variance for females, $Fs < 1$.

Insert Tables 3 and 4 about here

Defensive style

Means and standard deviations for the locus of control dimensions and represession-sensitization and their intercorrelations are presented in Table 5. Table 6 presents the summary of the regression analyses of the locus of control dimensions on repression-sensitization. Locus of control was significantly related to repression-sensitization for males, $R^2 = .405$, $F(3, 16) = 3.405$, $p < .05$, and for females, $R^2 = .312$, $F(3, 80) = 11.915$, $p < .001$. The correlations in Table 5 and the standardized betas in Table 6 indicate that internals tend to be repressors while externals tend to be sensitizers among each sex.

The regression analyses further indicate that locus of control dimensions were differentially related to repression-sensitization for males and females. For males, Fatalism was significantly related to repression-sensitization both independently, $F(1, 16) = 9.462$, $p < .01$, and relatively, $F(1, 16) = 10.219$, $p < .01$. Neither the Social System Control nor the Self-control dimension contributed to the repression-sensitization variance for males, $Fs < 1$.

Fatalism was also significantly related to repression-sensitization for females, both independently, $F(1, 80) = 5.035$, $p < .05$, and relatively, $F(1, 80) = 8.953$, $p < .01$. Moreover, the Social System Control dimension was significantly related to repression-sensitization independently and relatively, $F(1, 80) = 3.609$, $p < .06$, and $F(1, 80) = 5.930$, $p < .05$, respectively. However, the Self-control dimension was the strongest contributor to the repression-sensitization variance for females both independently, $F(1, 80) = 15.740$, $p < .001$, and relatively, $F(1, 80) = 21.395$, $p < .001$.

Insert Tables 5 and 6 about here

Discussion

In general, the results of these studies are consistent with earlier work. Both males and females with an internal locus of control orientation report greater self-esteem and ego strength than do externals, and internals tend to be repressors while externals tend to be sensitizers.

The results also support the hypothesis that males and females construe locus of control differently. For males, the Fatalism dimension was most strongly related to the adjustment correlates in all three studies. The Social System Control dimension was not related to any of the adjustment correlates for the males. On the other hand,

for females, the Social System Control dimension was consistently related to the adjustment correlates. However, while this is in accord with the predictions in these studies, in two of the three cases other locus of control dimensions were more strongly related to the adjustment criterion than was Social System Control.

These data may be interpreted in terms of parental antecedants of locus of control orientations. Research indicates boys tend to be given greater independence than is provided to girls. Being more restricted, girls are led to obtaining their goals by influencing parents. Thus, issues of power and social influence may be more salient for females than males.

On a methodological level, these findings have implications for future locus of control research. Measures of locus of control need to be developed which cover a variety of expectancy domains with equal representation. This would allow for more specific predictions and the selection of more sensitive criterion measures.

The obtained pattern of sex differences appears reliable. However, these studies only have used college student samples. Further work with this type of approach among other populations is necessary to establish the generality of these findings and could facilitate advancements in the study of group differences.

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Table 1

Intercorrelations, Means, and Standard Deviations for Locus of Control Dimensions and Self-esteem for Males and Females

Variable	1	2	3	4	Males M	Males SD	Females M	Females SD
1. Fatalism	---	.436****	.458****	-.305****	4.29	2.77	4.24	2.67
2. Social System Control	.311****	---	.429****	-.211**	5.85	2.65	6.77	2.60
3. Self-control	.302****	.160*	---	-.247***	4.17	2.27	4.99	2.16
4. Self-esteem	-.192**	-.254****	-.171*	---	43.17	9.00	40.70	8.56

Note. N = 164 males and 211 females. Correlations for males appear above the diagonal and correlations for females below the diagonal.

* p < .05.

** p < .01.

*** p < .005.

**** p < .001.

Table 2

Standardized Beta and Relative Weights from Regression of Locus of Control Dimensions on Self-esteem for Males and Females

Locus of Control Dimension	Males				Females			
	β	F	βr	F	β	F	βr	F
Fatalism	-.224	6.502*	.068	12.302***	-.095	1.708	.018	4.227*
Social System Control	-.063	< 1	.013	2.380	-.207	8.740**	.052	11.928***
Self-control	-.118	1.802	.029	5.227*	-.109	2.441	.019	4.226*

Note. For males, R^2 = .111, $F(3, 160) = 6.636$, $p < .001$. For females, R^2 = .089, $F(3, 207) = 6.760$, $p < .001$.

* $p < .05$.

** $p < .005$.

*** $p < .001$.

Table 3

Intercorrelations, Means, and Standard Deviations for Locus of Control Dimensions and Ego Strength for Males and Females

Variable	1	2	3	4	Males M	Males SD	Females M	Females SD
1. Fatalism	---	.310***	.108	-.335***	4.38	2.56	4.13	2.47
2. Social System Control	.361***	---	.293***	-.184*	6.21	2.37	6.30	2.54
3. Self-control	.408***	.395***	---	-.291***	4.36	1.86	4.41	1.90
4. Ego Strength	-.316***	-.229***	-.170**	---	14.25	3.28	13.15	3.53

Note. N = 189 males and 312 females. Correlations for males appear above the diagonal and correlations for females below the diagonal.

* $p < .05$.

** $p < .005$.

*** $p < .001$.

Table 4

Standardized Beta and Relative Weights from Regression of Locus of Control Dimensions on Ego Strength for Males and Females

Locus of Control Dimension	Males				Females			
	β	F	βr	F	β	F	βr	F
Fatalism	-.303	18.536***	.101	22.731***	-.265	19.187***	.084	29.234***
Social System Control	-.015	< 1	.003	< 1	-.129	4.597*	.030	10.441**
Self-control	-.253	13.132***	.074	16.655***	-.010	< 1	.002	< 1

Note. For males, R^2 = .178, $F(3, 185)$ = 13.271, p < .001. For females, R^2 = .115, $F(3, 308)$ = 13.312, p < .001.

* p < .05.

** p < .005.

*** p < .001.

Table 5

Intercorrelations, Means, and Standard Deviations for Locus of Contr

Dimensions and Repression-Sensitization for Males and Females

Variable	1	2	3	4	Males M	Males SD	Females M	Females SD
1. Fatalism	---	-.010	.215	.603**	4.90	2.41	4.44	2.75
2. Social System Control	.167	---	.289	.168	6.95	2.31	6.23	2.48
3. Self-control	.267*	.159	---	.085	5.40	2.20	5.00	1.93
4. Repression-Sensitization	.353***	.280*	.474****	---	49.40	22.13	48.37	21.61

Note. N = 20 males and 84 females. Correlations for males appear above the diagonal and correlations for females below the diagonal.

* p < .05.

** p < .01.

*** p < .005.

**** p < .001.

Table 6

Standardized Beta and Relative Weights from Regression of Locus of Control Dimensions on Repression-Sensitization for Males and Females

Locus of Control Dimension	Males				Females			
	β	F	βr	F	β	F	βr	F
Fatalism	.629	9.462***	.380	10.219***	.219	5.035**	.077	8.953***
Social System Control	.206	< 1	.035	< 1	.181	3.609*	.051	5.930**
Self-control	-.110	< 1	-.009	< 1	.387	15.740	.184	21.395****

Note. For males, $R^2 = .405$, $F(3, 16) = 3.405$, $p < .05$. For females, $R^2 = .312$, $F(3, 80) = 11.915$, $p < .001$.

* $p < .06$.

** $p < .05$.

*** $p < .01$.

**** $p < .001$.